

IN THE CLAIMS:

1. (Currently amended) A method of predicting a clinical response of an epithelial tumor or a cancer cell to at least one chemotherapeutic agentsagent in a patient comprising:

(a) culturing malignant epithelial cells having an unknown chemosensitivity profile from a patient tumor, ascites fluid, or pelvic washing;

_____ (b) contacting the malignant a sample comprising patient tumor or cancer cells with said agents separatelyagent in vitro; and

(c)(b) detecting the level of caspase-3 activity induced by each agentin the sample, wherein induction of caspase-3 activity in vitro is indicative of chemosensitivity of the tumor or cancer cells in vivo, thereby predicting a clinical response to said at least one chemotherapeutic agentsagent.

2. (Canceled).

3. (Canceled).

4. (Currently amended) The method of claim 1, wherein said tumor or cancer cells are epithelial ovarian cancer cells.

5. (Currently amended) The method of claim 1, wherein said tumor or cancer cellseell sample is are cultured tofrom about 50-70% confluency before said contacting.

6. (Currently amended) The method of claim 1, wherein said sample is contacted with said agents at least one agent for a length of time from about 4 hours to about 48 hours.

7. (Canceled).

8. (Currently amended) The method of claim 1 ~~claim 7~~, wherein said agents comprise one or more ~~are selected from the group consisting of~~ carboplatin, paclitaxel, docetaxel, gemcitabine, topotecan, and cisplatin ~~and any combination thereof~~.

9. (Currently amended) The method of claim 1, wherein caspase-3 activity is detected over a range of drug doses ~~further comprising performing dose response measurements~~.

10. (Currently amended) The method of claim 1, wherein caspase-3 activity is detected over time ~~further comprising performing time course measurements~~.

11. (Canceled).

12. (New) The method of claim 1, wherein the cancer is an epithelial ovarian cancer, and the chemotherapeutic agents include carboplatin and paclitaxel.